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ABSTRACT

Project PIONEER (Partnerships in Integrating and Operating New Effective Educational Research) was a 2-year funded Title VI Excellence in Education Grant awarded to Independent School District 861, Winona, Minnesota, for the purpose of promoting among secondary students "learning how to learn" skills and an awareness of how knowledge is organized in the humanities. The instructional effectiveness of the project was validated via faculty conducted action research that focused on the effects of three 2-day inservice training events on 27 faculty participants over a period of 3 semesters. Facilitators also structured a support network that included follow-up sessions, research dissemination, individual consultation, and maintenance of resource files. Project PIONEER is ongoing and continues to improve student academic achievement and enhance teacher interest in active learning strategies. (JAM)

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PROJECT PIONEER(Partnerships in Integrating and Operating New Effective Educational Research) was a two year funded Title VI Excellence in Education Grant awarded awarded to ISD 861 Winona, Minnesota in July of 1986. Winona Senior High, a school of 1287 students and 79. FTE teachers, was the primary site of the project. The project was built around a theme of "active learning in a learning community of teachers and students". It had the following goal and rationale:

GOAL: All secondary students will apply "learning how to learn" skills and become aware of how knowledge is organized in the humanities disciplines.

There are many nationally validated projects that have shown effectiveness in teachers' classrooms; what is needed now are national models which document how a range of currently popular educational innovations can be integrated, implemented and institutionalized within a school building.

PIONEER was structured around objectives in the following four areas: 1) Training and Support, 2) Curriculum Redesign, 3) Interdisciplinary Linkages, and 4) Student Outcomes.

Over the life of the project, 27 faculty participated in one of three two day training events. Facilitators also structured a support network that included: follow-up sessions, research dissemination, individual consultation, maintenance of resources files, etc. The project was validated via faculty conducted action research.

The project continues at the high school and the report to follow documents the successes and learnings from this endeavor.

Final Performance Report- PROJECT PIONEER 1/89
District 861 Winona Sr. High Winona, MN 55987
ERI-G-86-0121

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Winona's PIONEERING Efforts in Developing an Active Learning Community
for Students and Faculty- A Final Performance Report on ERI-G-86-0121

January 1989

by

Randolph J. Schenkat, Doris Jensen, and Nancy Wondrasch

FINAL REPORT ORGANIZATION

This report has been prepared in the following format:

- Project Demographics;
- Statement of Goal, Rationale, and Objectives;
- Description of Environment Prior to Intervention;
- Restatement of Each Objective With Detailed Description of Treatment and -Evidence of Success;
- Dissemination; and
- Candid Discussion of Project Operation.

PROJECT DEMOGRAPHICS

PROJECT PIONEER(Partnerships in Integrating and Operating New Effective Educational Research) is a project of Winona Senior High School 901 Gilmore Ave. Winona, MN 55987. The school enrolls 1287 students and has 79. FTE teachers. The city's population is 30,000 and the school district is fiscally independent. The percentage of students whose first language is not English is less than 1/10 of one percent. School records reveal 222 AFDC Units, with 21 % of the student body on free or reduced lunch. 50.77% of the students are male and 49.22% are female. 1.53% of students are classified as minorities.

PROJECT'S MAJOR GOAL, RATIONALE, AND FOUR OBJECTIVES

GOAL: All secondary students will apply "learning how to learn" skills and become aware of how knowledge is organized in the humanities disciplines.

The original application's rationale was stated as there are many nationally validated projects that have shown effectiveness in teachers' classrooms; what is needed now are national models which document how a range of currently popular educational innovations can be integrated, implemented and institutionalized within a school building. The Winona high school site currently has efforts in: training teachers in Elements of Instruction(Madeline Hunter), Writing Across the Curriculum, and perfecting the operation of School Based Management(SBM). The project focuses on the gains of lower quartile students as a criterion of project success as there are national issues in the over-identification of special education students and concerns for dropouts and unmotivated students.

The project was structured around the following four objectives:

- 1)Over the course of the project, 36 humanities teachers across three departments(English, Social Studies, and Foreign Language) in grades 7-12 will receive training in teaching "learning how to learn" strategies and in understanding hierarchical structures of subject content in the humanities disciplines.
- 2) At the department level, curriculum will be designed and implemented which better integrates a systematic use of student "learning how to learn" skills and student acquisition of the concepts, generalizations and broader theories of the discipline.
- 3)At a humanities level(3 departments-English, Social Studies, and Foreign Language across grades 7-12) plans will be made for interdisciplinary efforts[a] and pilot efforts to eliminate district academic tracking practices will be initiated[b].
- 4) At a student level, GPA's will increase in humanities courses and tardiness and absenteeism will be reduced as a result of Objectives 1-3s' activities.

DESCRIPTION OF ENVIRONMENT PRIOR TO INTERVENTION

Winona High School has a tradition of excellence. Shortly before the announcement of the Title VI Grant Award, the high school had received recognition for the Minnesota Department of Education for its programming for high potential students. The secondary setting has operated on the traditional tracking model of offering advanced, average, and remedial classes.

The district had a leadership change in 1983 with the arrival of a new superintendent who was a strong proponent of school based management(SBM) and teacher empowerment. By the end of the superintendent's first year, school based management had been set in place as a result of faculty endorsement and school board financial support.

Leadership at the high school had been in a state of flux. The principal who had guided the building since its construction had passed away in 1983. For a year two assistant principals shared leadership. The year of the grant's submission a principal was hired who seemed to be a perfect match for a teacher empowerment setting. The project was constructed considering his talents; however, he resigned shortly before the award notification. Some of his reasons for leaving portend contextual difficulties that impacted on PIONEER's success. Primarily, he envisioned district financial difficulties that suggested cut backs in staff positions which consequently would affect staff morale. Unfortunately, his successor's style did not create the

trust necessary in administrative leadership for Project PIONEER. Consequently, the project became almost exclusively a bottom-up, teacher directed initiative when a combination of administrative leadership and grassroots in the long term would have been more beneficial.

The Winona secondary setting has historically been very department oriented with little sharing between departments or even between the same departments across the junior and senior high boundaries. Often a degree of commonality occurred only when staffing patterns might call for a junior high faculty to teach some class sections at the senior high. Also, within the last few years K-12 curriculum committees have been instituted. These issues which have been documented in North Central Accreditation reports and in the evaluation of school based management at times have become divisive to PIONEER's goal.

Along with the implementation of school based management, a number of other innovations were being carried forward prior to PIONEER. Specifically at the High School, faculty were being trained in Elements of Instruction and in Writing Across the Curriculum. In retrospect, the base of support that was anticipated from Elements of Instruction was not as strong as expected. Positively, the trainer staffing experiences from Elements made the case for the necessity of facilitator release time.

There were, however, some less than supportive spin-offs from Elements, also. 1) PIONEER had hoped to continue some of the in-classroom support for teachers that had been initiated in Elements. In fact, this never came about, and project facilitators speculate that there was mistrust of these kinds of in-classroom efforts turning into evaluation.

2) Because of district financial austerity, the Elements program did not receive continued funding. There did not seem to be enough support for this seminal work in faculty development when teachers were being laid off. Some Elements leaders did not appreciate how their values in staff development could be continued in PIONEER. Rather, it was seen as a new initiative while Elements had been allowed to die. This did not create a unified front in seeking to keep PIONEER supported and funded at a high level after Title VI funding ended in September.

3) Programs and initiatives are viewed as discrete entities and not as building blocks to create more permanent conditions for professional development.

The project application was developed in less than one week because of the short time frame between notification from the Minnesota Department of Education and their application deadline. An hour meeting between the junior and senior high principals, director of curriculum and instruction, and special needs consultant (named project co-director) and a phone conversation with the Writing Across the Curriculum coordinator (one of the two project facilitators) was all the preplanning that was possible. This was very different from the extensive time devoted to faculty direction in planning in two previous grants awarded to the senior and junior high schools where the special needs consultant essentially served as a scribe working with faculty ideas.

The rapid development had repercussions when faulty involvement was needed after the award notification. The project originally specified junior and senior high humanities staff. After meeting with the Junior High School Improvement Council and their two designated planning representatives on a number of occasions in September of 1986 to establish the building's level of involvement, the junior high faculty decided not to participate. They cited low morale because of staff cut backs and corresponding higher class sizes as their reasons. Interestingly, many junior high faculty were doing voluntarily, the previous spring, what Project PIONEER dollars would support at the high school. Conditions can so dramatically change in the time span of several months between project submission and award notification.

PROJECT OUTCOMES

In the sections to follow:

- 1) each of the project objectives will be restated ,
- 2) specific activities related to each activity will be described (detailed description of treatment),
- 3) the evidence of success or partial success of each objective will be related with explanation provided.
- 4) The report will conclude with a candid discussion of project operation to serve as advice for others and share thoughts on replication of the project in other schools.

OBJECTIVE ONE-- TRAINING AND SUPPORT

1) Over the course of the project, 36 humanities teachers across three departments (English, Social Studies, and Foreign Language) in grades 7-12 will receive training in teaching "learning how to learn" strategies and in understanding hierarchical structures of subject content in the humanities disciplines (this objective has been modified to focus on all volunteering teachers from any high school academic department as a result of discussion with project officer).

2) Treatment Description

In a nutshell, treatment for Objective 1 for the first semester of the project focused on facilitator development of the project's training content. In the subsequent three semesters the cadre of PIONEERS continued to expand as two day training sessions and follow-up activities and support were offered for approximately 9 faculty per session. In the section below, the training sessions and follow-ups will be reported.

Training Sessions

Much of first semester was used in orientation to and development of the training program for Project PIONEER. In December and January, the project facilitators (Jensen & Wondrasch) gathered a range of baseline data, which would be used in planning the initial workshop, from teachers volunteering to participate. Data gathered focused on the following questions:

- *When you consider your own experiences, what got you actively involved in learning?
- *Think about those times when you were a "passive" learner. Describe the teaching techniques used, the outcomes expected, and the choices you made.
- *In your classes, what contributes to students being passive learners?
- *Identify the ways you presently go about turning passive learners into active learners.
- *How do you now assess different learning levels (recalling, relating, connecting, applying....)?

Tailoring around this data, a workshop with the following characteristics was designed:

Day 1-Feb. 5

- *Project Focus *Learning Styles--Multisensory
- *Learning Styles--Transactional *Reading Selection/Strategies
- *Application

Day 2-Feb. 6

- *Mind Exercise *Pre-viewing Exercise *Pretty in Pink /Note Taking
- *Viewer Response/Focusing *Circle or Graded Discussion
- *Refocusing *Mapping *Assessment Activity
- *Evaluation *Sharing *Semester Overview

The workshop did an excellent job in setting the stage for the collegial learning community that was to be fostered during the school year. This was captured well in the design and implementation that reflected a "non expert- we're in it together to learn and grow" mindset.

The project facilitators repeated the two day workshop for another 8 PIONEERS in October while the final wave of 10 PIONEERS was trained in February of 1988. In the latter two workshops more focus was put on the strategies of: cooperative learning, learning styles, and note taking in contrast to a more general coverage in the first year workshop. The 2nd and 3rd workshops were open to more academic departments(beyond the original three of English, Social Studies, and Special Education) with new areas being represented by Science, Mathematics, Home Economics, and Foreign Language.

Facilitators, initially, has some pre-workshop anxiety as a result of the broadening of the group, however the sessions were much more conflict free than the first session. In retrospect, this was attributed to the peer feedback from the first wave of PIONEERS, setting a much clearer vision of expectations for the seminars. Also, facilitators grew in sensitivity to the threat value of some activities. For instance, participants did not have to engage in graded discussion in the latter two sessions rather they only had to talk about. This seemed to help maintain a comfort level. The workshops were held as two day retreats in a setting at a local liberal arts college(College of Saint Teresa). This format and training away from the hassle of the high school has proven to be very conducive to the establishment of the learning community notion.

Over the three semesters, 27 faculty participated in project. A chart, ahead in Objective 4's Evidence Section, details the specifics. In summary, the project serviced the following number of faculty: English =11, Mathematics =3, Special Education =6, Social Studies =2, Foreign Language = 3, Science =1, and Home Economics=1.

Facilitator Support

For the balance of each semester, the project facilitators worked in a support capacity to keep the project contagion alive while nurturing the growth of their teaching peers. This was accomplished in a number of ways during the project:

A)Appropriate articles were shared with colleagues. For instance, "Adolescent Experience as Shakespearean Drama" was shared with the Psychology and Advanced Composition Teachers to serve as a vehicle to elicit cross departmental sharing. The facilitators kept up on current educational periodicals such as Educational Leadership, NCTE Journals, etc. and routed perceived articles of interest to selected faculty.

B)A system of logs was developed to coordinate the efforts of teachers. A Feb.13, 1987 memo requested, "please start logging those activities you are trying in the classroom to increase active learning and integrate higher order thinking skills. Describe the activity, attach handouts if you have them, talk about what works, talk about what doesn't. We'll be looking for how to support your efforts and for how to share ideas among the group."

C)Encouragement and the realities of change were shared with Project PIONEER participants. A Feb.19,1987 memo reminded,"research warns that if we don't get our feet wet almost immediately trying a new strategy, we probably won't ever find the right time. When trying something new, we are going to be worse before we're better. It's awkward and uncomfortable for us and our students during the trial and error period(when most people find it easier to give up and go back to the familiar approach). For these reasons, the support of colleagues is especially important."

D) Facilitators employed other means in furthering the project's ends. Invitations with RSVPs were sent out to participants to elicit commitment to the bi-weekly 7:15 am or 3:15 pm sharing meetings. Menus of new strategies tried in classes were compiled and shared with project members. As group interest dictated, new information was shared. For instance, the group became interested in cooperative learning as an active learning strategy. Also members learned of action research. In the project's second year, a shift was made to monthly 1/2 day sessions held during the school day by the use of a cadre of substitute teachers who took half the group's classes in the a.m. and the other half in the p.m. This notion of release time has become very popular with a group of faculty who initially did not desire to give up teaching time to work on instructional improvement.

E) Facilitators helped manage project information via two systems: participant loose leaf binders and PIONEER project room files.

Binders Every participant was given a loose leaf binder with handouts at the workshop. They added handouts from facilitators and fellow PIONEERS at each follow-up. They would also file materials distributed in-between sessions. As a result, participants suggested there was so much information on various topics they did not need or have the time to do more research in the project room.

Project Room Files In some cases PIONEERS presented/ shared experiences but did not run off copies of student work/units, etc. for everyone. In such cases they gave the facilitators the materials and these were housed in the project room with areas "units". For example:

STRATEGY-COOPERATIVE LEARNING: MATERIALS FILED

- a) Text -Learning Together and Alone by Johnson and Johnson
- b) Kliehne's notes on the book
- c) Minneapolis Tribune report of a Washington Post Editorial on Cooperative Learning
- d) 30 Minute Lecture Tape by Roger Johnson "Cooperative Learning: What It Is and How It Can Benefit Teacher and Student?"
- e) Segments of all three PIONEER workshops on video tape in which cooperative learning is presented and modeled
- f) PIONEER Model assignments with grid on how to grade and put together
- g) Journal handouts from NCTE on Cooperative learning/excerpts from Educational Leadership
- h) Curriculum Models- such as integration of cooperative learning into World Literature 151

Similar sets of materials were maintained in the Project Room in the following areas: learning styles, active learning/participatory learning, 4MAT. All ideas have been validated locally by project facilitators by their classroom use.

3) Evidence of Success

In this section, there is a sampling of remarks made by the three training groups of PIONEERS as a result of project insights in the following five areas: Quality of Training Sessions, Facilitator Support, Sense of Community, Challenge, and Reflective Thinking.

Quality of Training Sessions

"Thank you both for a most worthwhile professional retreat! The two day program of activities was extremely well-organized, relevant and challenging."

"I am convinced that the time was well spent, even though I was hesitant to take the time away from my classes for two days."

"I get the feeling that teachers are alienated and forced to do their job by themselves without the support of other teachers--this workshop has changed my mind. There are others out there who need and want the support and encouragement to 'do something better' for their students. This workshop reinforced the idea and hope that no matter what we are doing now, we can do better through cooperation & interaction with other teachers".

"PIONEER is worthwhile in that it allows us to share ideas with one another. As teachers we can become very isolated in our classrooms, and sometimes we need some outside influence to jar us out of our ruts. I found myself motivated to change some well worn strategies which makes for a more interesting hour for my students and me."

"The concepts and theories which PIONEER presented to me were easily transferred into very real, usable, and successful classroom activities. My students learned more through active/hands-on participation. Somehow there's been a shift from my responsibility to their responsibility for learning. Overwhelmingly, they preferred "PIONEER-inspired" activities to my old, traditional methods. Also, sharing with other teachers is a delight and a constant reinforcement/source for new ideas."

"I thought the two days spent[in the workshop] with this group were very productive. I appreciated the exchange of ideas, the sharing, the new materials, the heightened awareness of making learning an active vs. passive experience, and the opportunity to become better acquainted with peers.... Upon leaving the workshop, I was fired up to go forth and risk--myself and my ideas for my students. I felt good about that!"

Facilitator Support

The support system that PIONEER established was also valued by faculty as reflected in the comments below.

"It is one thing to attend an in-service and hear good ideas; it's another to have a support system of colleagues there to listen, advise, encourage and share in the problems and the successes.... I was surprised at how much I've used PIONEER-inspired strategies at the start of this new year."

As described above, in the project's second year a shift was made to monthly half day collegial sessions. The comments below show the significance of this move.

"I felt more at ease having a half day session versus a before or after school session. Last year I always felt rushed in sharing. Also, I felt anxious to be elsewhere; thus distracting me from listening to others."

"It's great that we finally get some time while 'on the job' to enrich ourselves with new ideas and the latest research."

"What a relaxed environment in which to share problems, successes and not be confined by a time factor. Teachers need days to put it all into perspective far more often! I can hardly wait for our follow-up day."

Sense of Community

The support sessions built a sense of community among the participants, in which participants are open to challenge and reflection as revealed in the next set of comments:

"I learned to share a little of myself with my fellow educators and this instilled a "warm" feeling that makes me believe we should not be so isolated."

"Each session we seem to loosen up and gain greater acceptance to new approaches to old teaching problems."

"Each time the PIONEERS meet, I look forward to it more. The sessions create a desire in all of us to make use of some of the suggestions".

"I appreciated the time to do some quality professional reading followed by discussion and sharing with fellow professionals.. I felt proud to be working with a group of people who care about their jobs, want to improve, and do their best for students."

Challenge

"If we want to use 1987 techniques and get 1987 results then we must be willing to examine our 1967 methods and see if the approaches are still valid."

"Everyday teaching routines have to be challenged to try something new".

Reflective Thinking

"Forced me to take time to think about not only what but why I do what I do when I teach & allows me to look at learning more from the student's viewpoint".

Other Issues Related to The Training and Support Objective

Attendance at follow-up sessions or support groups averaged 79%. In addition to the support groups, the project facilitators each had an hour of release time per day to work with PIONEERS. The Table 1 below summarizes the activities into a percentage of time allocation.

TABLE 1- Facilitators' Time Allocations to Project Functions

-Organize workshops/follow-ups	20%
-Research/ Reading	25%
-Coaching individual teachers on strategies	15%
-Validating strategies in own classrooms to model	25%
-Project Administration/meetings & preparation	15%

Although participants' comments above on the workshop and ongoing support sessions are very positive, project facilitators' candid observations support the notion of a long growth period to establish the learning community that is envisioned in the project goal. Currently it is felt that a developmental ladder might find a third of the participants at the top(this is characterized by the mindset of playing off new strategies with a peer prior to implementation and/or later reflecting on the strategy). Another third are accepting and ready to apply but seem to be hesitant to risk and let excuses get in the way. The final third, are still asking mechanical questions and trying to figure out the strategies. This analysis is of volunteering portion of faculty who represent approximately 35% of the total high school staff.

OBJECTIVE TWO -- CURRICULUM REDESIGN

1) At the department level, curriculum will be designed and implemented which better integrates a systematic use of student "learning how to learn" skills and student acquisition of the concepts, generalizations and broader theories of the discipline.

2) Treatment Description

Beyond the support for an active learning community, that the project goals endorse, PIONEER also focused on systemic issues. It is not enough for one teacher to take things back and try in an isolated classroom; rather workable ideas must get built into the culture of the school. This project activity came most directly from the availability of summer curriculum writing time. Redesigned coursework as a result of Project Pioneer's learnings occurred in the following courses: American Literature, American Government, Advanced Composition, American History, Types of Literature, World Literature, Spanish Two, and Basic Computers.

3) Evidence of Success

The curricular modifications made in World Literature 151, Basic Computers, and American Government [all courses for average and "low ability" students] will be reported to exemplify the type of work that has been done through Project PIONEER.

World Literature 151-- Built into the course overview is the following wording...."will emphasize activities and use strategies that increase active participation and validate personal reader response.....Writing should be an integral part of all class work.....and students will develop critical thinking skills and promote the sharing of ideas".

The class begins by students experiencing and having readings regarding learning styles, strategies, and cooperative learning. A teacher's resource in the curriculum guide is Weinstein's "Fostering learning autonomy through the use of learning strategies". Project learnings are institutionalized into the curriculum by the development of pre-reading guides, readers' logs, double note taking pages, and sample concept maps for the range of teachers that may teach the course.

American Government --This curriculum work is exemplified by the following range of objectives and active learning strategies which have the appropriate materials available for easy implementation:

- 1) Student participation in discussing the pros and cons of the juvenile justice system via the use of circle graded discussions,
- 2) Research the use of propaganda techniques and evaluate how public opinion can be swayed. Using 4 MAT (McCarthy's Learning Style/Brain Hemisphere Model)-students participate and discuss results of challenge, teacher shows examples of commercials and political ads and lectures on 9 techniques of propaganda, students practice on identifying techniques and gathering examples, and students classify and share examples.

3) Demonstrate an understanding of the functions of city and county government via a cooperative learning experiences in which: the checker decides on appropriateness of the articles for others in group, the reader orally presents the article, the recorder summarizes the article and explains why it fits the category, and reporter presents the group's articles to the class.

Basic Computers--This curriculum work is exemplified by the following range of objectives and active learning strategies:

1) Student will understand and use current computer vocabulary and jargon, be able to read computer related articles and communicate with others about computers. In partially meeting this objective, the curriculum planning spells out-- "Orally ask students the question "What is a computer?" and list some of the responses. Students will be given a 2 page handout entitled "What is a Computer?" After allowing 5-10 minutes to read, the students will be given a partially completed outline to fill in using the reading assigned. The first outline will be fairly explicit, (so that responses should be obvious). A completed outline can then be displayed on overhead. Then the material will be demonstrated by 'concept mapping'. Using a blank transparency, the teacher will guide the students with appropriate questions to produce a concept map in their notes [sample included in curriculum work].

The project effort has taken current writing far beyond the too common activity of curriculum writing resulting in the copying of scope and sequence charts. The above examples are excellent models. This aspect of the project, however, has raised the issue of academic freedom. Should curriculum writing go beyond the specification of "the what" to "the how" of teaching. This issue will be discussed more fully in the report's final section.

OBJECTIVE THREE- INTERDISCIPLINARY

1)At a Humanities level(3 departments-English, Social Studies, and Foreign Language- across Grades 7-12) plans will be made for interdisciplinary efforts[a] and pilot efforts to eliminate district academic tracking practices will be initiated[b].

2) Treatment Descriptions

High School Initiatives

a) In the project's first year,interdisciplinary efforts mostly came from support groups and common sharing that facilitators arranged as was cited above where appropriate articles were shared with colleagues. For instance, "Adolescent Experience as Shakespearean Drama" was shared with the Psychology and Advanced Composition Teachers to serve as a vehicle to elicit cross departmental sharing. In the second year, this sharing was enhanced as the number of academic departments whose staffs participated expanded to math, science, and home economics, and foreign language along with social studies(1 active participant), English, and special education departments from the project's first year. The focus on cooperative learning has set the stage for much more faculty cooperation in a high school that has been historically very departmentalized while the range of departments represented allowed for much more informal understanding of the instructional similarities across departments.

Tracking

b) In regards to the tracking practices, pilot efforts, during the second year of the project, in Biology sought to teach classes at a mixed ability group level attempting to move away from an

essentially three track approach that has been common practice in the Virginia secondary setting. The project director was used as a consultant in training for textbook selection considering factors of text considerateness. One project facilitator was to work with Biology faculty in supporting a broad range of learners in the previously tracked Biology classes.

Task Force With Higher Education

In looking more broadly at interdisciplinary issues, a task force group of PIONEERS representing English, social studies, and science met with local college counterparts and the project director for a series of four meetings during the first semester of the 2nd year of the project to address the following issues:

- 1) What are the major principles, generalizations, theories, and structures for any of the discipline areas? How might they be related across disciplines?
- 2) How much does our curriculum reflect the changing nature of knowledge?
- 3) What are subject area methodologies (ways of knowing...i.e. the scientific method) and how common are they across disciplines?

3) Evidence of Success

High School Initiatives

a) These meetings and sharings were significant in a building that has always operated around "closed" departments. The project, however, elicited no formal sustained interdisciplinary activities especially in regards to specific curriculum writing. Also members of the Social Studies Department (a key department for interdisciplinary links) did not become active participants in PIONEER. Even in social studies classes where special education team teaching was done with PIONEER methods, little transfer took place when teaming was cut back during the second year of the project.

Tracking

b) The reduction in the practice of academic tracking in the district as a result of PIONEER has been limited to date. The Biology "experiment" resulted in a pull back from full mixed ability grouping to the concession for the need of advanced sections in Biology as a result of the first semester experience with BSCS Green. The appropriate level of support in working with Science faculty was difficulty to marshal. This effort, however, brought together the bottom 80% of the sophomore class for common educational experiences. Tracking has been a way of operating in District 861 for many years. Old traditions maintain a high degree of support. The project made no overt claims to be about eliminating tracking. If active learning strategies work as well as they have appeared to in some of the pilot endeavors (as reflected in the action research), it certainly is fitting, however, to continue finding niches to have non tracked classes if they are carefully supported.

Task Force With Higher Education

c) The four brief meetings of the interdisciplinary team (representing 3 PIONEERS and 3 Higher Education faculty), attempting to answer the questions posed above, revealed the complexity of the task. In retrospect, recent findings of Applebee and Langer in their report - The Conceptions of Learning in Academic Subjects- which was conducted with high school and college teachers

seem very cogent. "Biology teachers had a larger vocabulary to talk about discipline specific forms of argument and evidence than did their colleagues who were teaching American history or American literature. ..In all three disciplines, however, the overwhelming characteristics of teachers' discussions of such issues was their inexplicitness." In summary, it was found to be very difficult over a short period of time to get faculty at either secondary or the college level to answer the questions guiding the meetings.

The project director developed the documentation to carry forward three related suggestions from Objective 3 to the district's curriculum committee:

- 1) Plot out the interdisciplinary relationships in thinking skills under the areas of both: of thinking and about thinking.
- 2) Develop curriculum that reflects the alignment of outcomes and assessment that gives attention to higher order outcomes.
- 3) Teach to misconceptions.

A failed referendum changed the focus of the curriculum committee for the project's second year and the three suggestions above were never considered.

OBJECTIVE FOUR- STUDENT OUTCOMES

- 1) At a student level, GPA's will increase in humanities courses and tardiness and absenteeism will be reduced as a result of Objectives' 1-3 activities.

2) Treatment Descriptions

The original project application specified that faculty would become involved in Action Research. "In making bottom up change in a school building through their own classroom research, PIONEERS could convince their peers to employ state of the art techniques to improving student learning". The research format called for teachers to specify: hypotheses, controls, variables, interventions, results, and conclusions.

3) Evidence of Success

There is no definitive GPA data, the project has generated several good examples of Action Research using a variety of interventions. The 8 pieces of action research reported below are presented in pairs, contrasting 1st and 2nd year research in regards to changing focus and sophistication.

HISTORY

Attention to visual, auditory, tactile/kinesthetic inputs as means to learn the materials in Chapter 25 of a low ability History Class resulted in two sections average grades of 81% on the end of chapter test. The control intervention of just auditory inputs on materials from Chapter 31 resulted in average grades of 74% even though it was reported to be an easier chapter test(Yr1) .

It was hypothesized that 16 students from a Developmental American History class would receive better grades on their chapter worksheets which were completed in a cooperative group(determined by learning styles) than in either sociogram assigned groups or by working individually . The means under three conditions were compared: Individual=78% Sociogram Assigned Cooperative Groups=81% and Learning Style determined cooperative groups=91%. (Yr 2).

GOVERNMENT

The following final semester grades in an American Government Remedial class were reported. 2nd semester grades revealed 94% of students obtaining passing grades while in 1st semester 78% received passing grades. The differences in students' passing rate was attributed in part to the note taking, summary, and mnemonic strategies that students learned as a result of Project Pioneer.(Yr 1)

Three comparable Developmental American Government classes were studied to ascertain the effectiveness of 20 minute review periods. The two interventions were: cooperative group review of unit test content vs. the more traditional method of teacher centered review in which the whole class participated in asking questions. Along with the cooperative grouping, students were also awarded bonus points if their study groups collectively obtained A and B's. The class using the cooperative techniques has a mean score of 42 while the two traditionally conducted classes had means of 37 and 39. In further analysis of the results, it was noted that the cooperative learning group has the highest percentage of special education students (55%); also, three of the students failing the exam were absent for the review. (Yr 2)

GENERAL ENGLISH

In a general English course, it was hypothesized that a process of: discussion of previous experiences, expressive writing, class sharing, and anticipatory set on "Forest Fire", post reading discussion, and prewriting used in one section of the class(5th Hour)accounted for significant performance difference between sections. In contrasting 5th with 6th hour, 5th hour had 29/32 papers handed in on time; work complete; and work done satisfactory. While in 6th hour class (which generally was reported to be both more expressive in writing and speaking) only 13/32 papers were handed in on time; work was not complete (part of the process not there); and overall performance unsatisfactory.(Yr 1)

A comparison was made between the educational effectiveness of auditory input(lecture from teacher, notes taken by students, no modeling on overhead, class time for silent reading) vs. visual , auditory, tactile, kinesthetic inputs(schema building through discussion for comprehension of material, lecture/notetaking on transparency, mapping of characters in ODYSSEY, oral reading of poem by teacher, and discussion follow-up.) The mean grade in the traditional class of teacher lecture was 60.5% while the mean grade in the enhanced, multi-modal intervention was 75%. Further, the traditional lecture instruction resulted in 38 D's and F's while there were only 4 D's and F's in the multi-modal intervention.(Yr 2)

LITERATURE AND ADVANCE COMPOSITION

In a comparison of World Literature matched classes for average and low ability students in 1986(pre-PIONEER) and in 1987, as a result of students learning to use 1/3-2/3 notetaking style, the 1987 class had 91 % passing grades vs. 71 % passing grades in the 1986 class.(Yr 1)

Within the 4MAT teaching approach, "how will active participation for the right brain in Quad 2 affect graded discussion in Quad 3?" was the question asked in action research conducted in Advanced Composition. In the control group, 18 students in one class period were given the definitions of absurdism, Theatre of the Absurd, and existentialism before a reading assignment. In the experimental class, beyond the definitions, they participated in an experience/observation that allowed sensing of absurdism in action. The research question was answered by tallying the relevant comments made regarding absurdism. In the control condition only two students, independent of each other and at widely spaced intervals, brought up the absurdist point of view. In the experimental condition, there were seven contributors. The experimenter will, also, be looking for carry over into critical analysis essays students will be writing the following week.(yr 2)

Action research has been conducted in many other subjects using several different research questions. Other classes were: Advanced Algebra, Biology, Parenting, Basic Composition and German 4-5, World History, Spanish, and Learning Disabilities. Additional questions have centered on: cooperative groups and their arrangements, notetaking methods, attention to learning styles, etc. There has been marked variation in how "scientific" the researchers have become with some simply writing anecdotally about the project.

The original narrative ambitiously claimed to show changes in student grade point averages. Upon reflection, it is realized that few staff development projects have shown student achievement gains. For instance, even the exhaustive NAPA Valley efforts by Wolf, Evans, and Stallings have shown little long term GPA type data. When building teacher learning communities where experimentation is the norm, it seems overly optimistic, in retrospect, to see GPA type difference as the result of a project. This becomes apparent when it is realized that the action research is done only for small segments of a semester and most of these gains even though positive are not of the type that will effectively overall grade point averages. This type of research, across a range of departments, does however set the conditions where school wide leadership might embrace the establishment of goals that focus on raising overall GPA with the necessary safeguards for grade inflation built in.

Chart 1 below shows the PIONEER faculty (with training cycle bracketed after their names) and the number of students they teach over the course of a year. Numbers aren't unduplicated; however, it seems reasonable to assume given the range of departments (especially in the required course areas) that almost all Winona Senior High and many Junior High students have been touched by the project. This impact has come through specifics that students are learning about themselves as learners from information on learning styles, notetaking strategies, etc (in which case students may generalize their learnings to faculty beyond PIONEER) and/or through specific adaptations faculty have made in their conducting of classes.

DISSEMINATION

Extensive effort and reflections from a number of parties has gone into this final report preparation. It is felt that it meets the standards from publication in ERIC. Beyond the notion of products that could be shared from the project informally: video tapes of sessions, the file of teacher logs, or compendiums of materials centering on certain topics; this report is seen as a valuable document for district staff development committees or high school staffs to read. Candor has been the guide in its development, and the insights may be valuable to settings ready for this type of an experiment in "active learning for students and faculty".

PIONEER was presented in November 1988 at the National Council of Teachers of English Conference in St. Louis. Portions of project findings will again be presented at NCTE in November of 1989. The project director and facilitators are also working on a shortened version of this report for the National Staff Development Council's publications.

LEARNINGS AND THOUGHTS FOR REPLICATION

ASPECTS OF LASTING VALUE THAT CAME FROM PIONEER

- reinforced the value of local facilitators --guiding peers as opposed to outside experts
- one project facilitator with a strong personal commitment to staff development has become the building's assistance principal
- a beachhead for action research was established, this has linked staff development to student achievement

CHART 1 Numerical Impact of PIONEER on Faculty/Students

DEPARTMENT	FACULTY	NUMBER OF STUDENTS
English	Miller (1)	234
	Hanzel (1)	Jr. High 325
	Kiihne (1)	270
	Coe (1)	250
	Bailey (1)	260
	Jensen (1)	130
	Manley (2)	240
	Juaire (2)	220
	Rasmussen (3)	Jr. High 150
	Harris (3)	Jr. High 147
	Nuttall (3)	Jr. High 152
Mathematics	Miller (2)	208
	Virgin (3)	97
	Krenz (3)	105
Special Education	Johnson (1)	team taught & 18
	Benke (1)	27
	Wondrasch (1)	team taught
	Dettle (2)	18
	O'Dea (2)	18
	Drenckhahn (3)	25
Social Studies	Anderson (1)	270
	Ruggeburg (1)	---
Foreign Language	Haase (2)	250
	Hoffe (3)	110
	Ludwigson (3)	69
Science	Rosendahl (2)	276
Home Economics	Hanke (2)	105

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- participating faculty have been provided a model of ongoing learning and professional dialogue (sharing of collective talents and developing a sense of community)
 - a premium has been placed on continual new learning via reading and reflection
 - release time over the payment for time spent beyond the contract day has gained favor as an incentive for staff development
 - one project facilitator will likely become a permanent member of the district staff development committee
 - "learning how to learn" and understanding self as learner has occurred for most secondary level students--overwhelmingly they prefer "pioneer inspired activities to old, traditional methods."
 - action research has demonstrated success with lower quartile students

VISION GUIDED PROJECTS

In reflection on the original application for Project PIONEER, it went beyond a goal statement and series of objectives; rather it represented a vision for staff development and services for lower quartile students. This vision related strongly to the notion of an active learning community for students and teachers. It was shaped in the five days between the time of notification of the competition for the Title VI grants to submission to the Minnesota Department of Education in the fall of 1985. Much learning about project operations and impact can be gained by considering the question in hindsight "what could have assisted PIONEER attain this vision? with two sub questions: 1) How could the necessary stakeholders share the PIONEER vision? and 2) How does a school begin to see staff development as a tool for the success of its lower quartile students? Further, considering the long term support of the project, a higher threshold has to be set for ongoing project support. The following sections consider these three points: stakeholders' vision, staff development as a tool, and thresholds of support.

1) How could the necessary stakeholders share the PIONEER vision?

In general, the project was not viewed by the project director or facilitators as an issue of vision management. Often in project planning the dreams for "active learning" would be alluded to, but directly marketing a vision was not considered. Rather, planning usually focused more on what the timeline was calling for whether it be starting the next series of workshops, setting parameters for action research, or scheduling summer curriculum writing. Consequently, beyond the PIONEER participants who picked up in varying degrees the contagion of the project, other key stakeholders (school improvement council, department chairs, district staff development council, building and central office administration) proceeded on their busy lives in a complex school environment without understanding the meaning of PIONEER.

It was not until second semester of the second year of the project that discussion in earnest focused on the "selling the project's vision" as the garnering of long term support became imminent. So of crucial importance in projects of this nature is the immediate attention to project marketing. Reflecting on the facilitators' distribution of time, perhaps more time needs to be allocated to public relations directly. Additionally, the importance of the project for teacher professionalism needed to be packaged in ways that the PIONEERS could more readily influence their building peers. Finally, issues surrounding the project needed to become more common in the discussions of both department chairs, the school improvement council, and the administration.

In retrospect, why did these activities not occur? First and foremost, operational aspects of the project were so time consuming that marketing was not a high priority. Second, given the relative inexperience of the project staff, there was not the awareness of the hard selling that is necessary. It seemed that the "goodness of the project" would sell itself. There was a failure to consider all the competing agendas existing in a busy high school. During the project's life the following issues surfaced:

- a) reduction of secondary staff,
- b) austere budget conditions with much energy going into two referendums,
- c) the weathering of an ineffective principal who was hired and who left during the life of the project,
- d) the jockeying between the old departmental structure and School Based Management as a new form of representation for faculty.

In regards to competing agendas, in particular, the functioning of School Based Management was important to PIONEER. The project became very grassroots as it appeared to the facilitators that the project would go nowhere if it was associated with the new principal's office. This

approach was successful in gaining 23 participants from a faculty of 79. However, if a project is to operate in the absence of administrative leadership, school based management needs to take a much more supportive posture. Ironically, when it came to votes on dollar support to continue PIONEER with building level staff development dollars, there were many old mindsets that see dollars better used for out of district travel (perks that comes via rotation to member of a department). Further, discussion about non cost ways of supporting faculty development (assigning students to study hall, shifting departmental loads to free facilitator's time, etc.) were never considered. Also, some governance structure representation issues caused a skewing of support away from the new thinking regarding staff development embodied in PIONEER. Each department has one vote; no matter what the size. Some of the smaller departments which have not had members participate in PIONEER had not been courted to appreciate the vision underlying the project. In summary, issues of views on spending staff development dollars, creative problem solving for staff development, and voting patterns were important in the fate of PIONEER.

2) How does a school begin to see staff development as a tool for success of its lower quartile students ?

At a broader level, School Based Management has not evolved to the level where it considers the relationships between teaching, student learning, and the role of staff development as a tool in enhancing student learning. Action research at the school site is only seminal and it is not a commonly accepted norm that modification of instruction is the variable controlled by teachers that is powerful in ensuring the success of learners. Rather the norm centers on motivation, parents, out of school jobs, drugs, etc. as the reasons that students do not learn. This new norm of instructional empowerment has to emerge concomitantly with faculty on the job learning and continual professional growth. Further issues have to be clarified in what is the administration's vs. departmental role in monitoring student success and offering support. Other issues center on how outcomes and curriculum get used. For instance, when a project like PIONEER develops curriculum strategies for a particular large section course that is taught by several faculty, what should be the expectation for use? School Based Management is still at the level of considering types of issues such as: when will semester tests be scheduled and should teacher conferences be offered in both semesters or only in first.

CONTINUED SUPPORT

Considering the long term support of the project, perhaps a higher threshold of resource allocation has to be set for ongoing project support. As the project drew to a close and thoughts of ongoing support were considered, very conservative budgeting was done to just keep the project alive for those who had experienced this new way of professionals interacting. Even this lobbying for dollars was unprecedented as the high school PIONEERS banded together and advocated for their share of the building's staff development dollars (this represents the final evaluation of the worth of the project in the minds of the participants). This lobbying, however, was done within the realities of a very small district budget that is both allotted to building sites and the district staff development committee. Thus PIONEER garnered approximately \$1,800 to support faculty follow-up release on a limited basis.

The central notion behind the support was to schedule follow-up sessions for faculty with the facilitators volunteering leadership. Half way into the first year after project support, the spark that release time provided is being realized. Ironically, both project facilitators assumed more demanding roles this year which sap much of their time for voluntary leadership. The facilitator from the English department had a first semester teaching load of all composition classes leaving little time. The second facilitator has become the school's assistance principal. On the surface this would seem to be a positive benefit for the vision of PIONEER, and it may be

in the long run. But the new position at a half time level is so taxing that little energy is left for PIONEER. In this budgeting, due consideration was not given to the facilitators' daily personal contact with faculty that had such a marked effect on keeping the project alive during the two funded years. Consequently, such functions as targeted readings, maintenance of the faculty summaries of attempted interventions, and availability with faculty to discuss teaching and learning go undone. This project report has caused an appreciation of the true effects of the project and what keeps the project at its level of intensity (foremost here is allocated staff time for ongoing faculty support).

Somewhat reinforcing of the above point is the outcome of the buildingwide staff development day on November 11th. Much of the day was scheduled to be PIONEERS sharing of various aspects of instructional interventions they had practiced. This was set on a voluntary basis with great expectation from the director of curriculum instruction on down that PIONEER would make significant strides in becoming a part of all faculty's vision. Although PIONEERS made contingency plans on how to deal with non volunteers, faculty were not required to attend sessions. Consequently, few new faculty (to the PIONEER experience) attended sessions. Again evidence that soft sells or at least non-strategic sells do not work well.

The vision of PIONEER is also beyond the current considerations of the district staff development committee. The committee which is structured both contractually and by Minnesota Department of Education regulation to be very teacher centered has had a difficulty time maintaining enthusiasm for staff development. Their monthly, after school meetings perhaps have not allowed the forum for participants to embrace the possibilities that PIONEER type faculty professional growth can bring. It probably takes much more time for members to develop a sense of shared meaning on the possibilities of staff development in keeping with the PIONEER spirit.

OTHER LEARNINGS

FITTING INTO THE FABRIC OVER THE LONG HAUL

The December 1988 issue of The Developer (National Staff Development Council's Newsletter) listed nine assumptions for school improvement: vision, shared values, principal leadership, climate of scholarship, focus on curriculum, excellence in teaching, monitor, collaborate, and self renew. These seem so fundamental, and in a way, were cornerstones of the original application. Why is it difficult to put these in place through the grant process?

It seems that grants do not permeate the fabric of a school; rather they are seen as add-ons. Some of the above analysis reflects the myriad of competing agendas that occur over a grant's life. Also, conditions can change so drastically between award submission and notification of funding. Further, the low probabilities on funding make it somewhat difficult to continually rally faculty for "iffy" funding. Perhaps after funding notification, a district should have a year to plan how the grant could get definitively built into more aspects of the culture. If this plan does not show integrity representing some of the nine assumptions above funding would not be forthcoming. One year grant awards that come mid-summer with school year start ups are necessarily overcoming many hurdles to be successful.

Although PIONEER was fortunate to have a 2 year project life, in retrospect it was an incredibly ambitious theme - "active learning for students and faculty". [By nature they have to be ambitious to catch the field readers' attention] It would seem that these efforts would be better planned for longer time frames considering what we know on how fast innovation can occur in sites. In PIONEER's regard, action research began to set the mindframes, next certain departments needed to experiment with the aspects of collaboration that allow them to be successful with a broader

range of students, these findings have to be promoted and shared across departments. School Based Management has to set direction and expectations. All of this could easily map out to a 5-7 year project. Schools seldom project this far into the future especially with the vagaries of funding.

Two solutions come to mind. David Hunt, insightfully, reflects on his experience in of Upward Evaluation--unequivocally pointing out two years of experience was the threshold that students needed to profit from the project but being told by the OEO Director that such a doubling of service would cut in half the number of voters seemingly benefited. Fewer demonstration grants in which funders carefully work with sites could develop stronger models.

Without longer funding periods, if true project impacts are desired, recipients need to specify longer range plans and pledge some continuation of the effort. School Based Management offers some hope here as budgeting could move more to a model continual review of best allocation of our budgets vs. a current model of everything stays and innovation only comes through additional monies. In this project a school improvement council that had evolved further might have considered other options in PIONEER. For instance, has team teaching between regular and special education shown that learning disabilities students can succeed in regular classrooms if classroom teachers continue to use the team taught practices? If these practices can change, does this free special education dollars for other uses? Perhaps federal grants should call for longer range thinking in applications, and defer some payments until two years past grant completion contingent on the grantee continuation of the effort.

PACKAGES VS. INTEGRATED MODELS

Currently in school district change efforts, it seems that packages predominate. The report's section on The ENVIRONMENT PRIOR TO THE AWARD alluded to the lack of perceived similarity between PIONEER and Elements of Instruction .

The project director experienced a slight tension with project facilitators because the project took a definite learning style focus which was not incorporated in the original application(the rationale for the project was to synthesize existing efforts not add others). In general it seems that trainers and participants are more comfortable packages. Much of PIONEER's second year was built around 4MAT and learning styles although analysis of actual faculty work would allow it to be cast in many other models. For instance, the action research on auditory vs multi-modal inputs(set out below) could have also been represented from an Elements of Instruction or Cognitive Instruction Model.

"auditory input(lecture from teacher, notes taken by students, no modeling on overhead, class time for silent reading) vs. visual , auditory, tactile, kinesthetic inputs(schema building through discussion for comprehension of material, lecture/notetaking on transparency, mapping of characters in ODYSSEY, oral reading of poem by teacher, and discussion follow-up.)"

From a trainers' standpoint models cut the work of conceptualizing and preparation. From a change point of view, identifying with models creates the perception with faculty that new programs are being continually selected rather than building on previous bas s. In PIONEER's regard, facilitators were not involved in the original application that integrated the models and did not bring this type of understanding to the project.

KNOWLEDGE ORGANIZATION IN THE HUMANITIES' DISCIPLINES

The project in most respects stayed with the status quo in regards to curriculum outcomes and focussed more on the delivery of the curriculum. The learnings from the project's slight forays

into discipline knowledge structures seem to be in keeping with Newman observation: "we teachers have been socialized to construe knowledge as the outlines of the content of introductory textbooks. Seldom in our own undergraduate or graduate education did our professors engage us in deep inquiry." Lee Shulman is prophetic on the direction staff development will be taking: "the next generation of staff development activities will go beyond the generic teaching skills' perspective and will become much more content specific."

UNANTICIPATED IMPACTS

Much of the reflections suggest "what could be's" if we had only done it differently. There is always much to learn from a project in hindsight. However, it must not be forgotten that the project was a good faith effort that saw many people giving their very best. In addition to the aspects of lasting value mentioned earlier, the project has had many unanticipated positive aspects. Ones that the project director has noted over the years will be mentioned:

- 1) A junior high guidance counselor enthusiastically talked about the power of active learning for hard to teach children at a district curriculum committee as a result of seeing its effectiveness in General English classes.
- 2) The district continues to promote a model of peers' training and sharing with peers partially because of the success of PIONEER.
- 3) Learnings from PIONEER have had impact on the District Curriculum Committee as higher order thinking skills and outcomes based education become district themes.
- 4) The process of reflection and dialogue surrounding this final report has been helpful in furthering the cause of active learning across the district.

In summary, much progress has been made on the challenging task of building an active learning community for students and teachers in Winona, Minnesota as a result of Project PIONEER.